

Just 1

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WHAT IS CLAIMED IS:

1. A zoom lens comprising, in order from an object side, a first lens unit of positive refractive power, a second lens unit of negative refractive power, a third lens unit of positive refractive power, a fourth lens unit of negative refractive power, and a fifth lens unit of positive refractive power, wherein said zoom lens moves a predetermined lens unit during zooming from a wide-angle end to a telephoto end so that a separation between said first and second lens units increases, a separation between said second and third lens units decreases, a separation between said third and fourth lens units increases, and a separation between said fourth and fifth lens units decreases, and wherein an image is displaced by moving at least part of the fourth lens unit so as to have a component of a direction perpendicular to an optical axis.

Just 2

2. A zoom lens according to claim 1, wherein said zoom lens forms an image on a photoelectric conversion element.

3. A zoom lens according to claim 1, wherein said fourth lens unit comprises two or more lens components including a lens component of negative refractive power, and the image is displaced by moving the lens component of negative refractive power so as to have the component of the direction perpendicular to the optical axis.

Just 2

4. A zoom lens according to claim 3, wherein said fourth-lens unit includes a lens component of positive refractive power and a lens component of negative refractive power.

5. A zoom lens according to claim 3, wherein a condition $0.01 < f_{is}/f_4 < 0.8$ is satisfied where f_{is} is a focal length of said lens component of negative refractive power so as to have the component of the direction perpendicular to the optical axis, and f_4 is a focal length of the fourth lens unit.

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6. A zoom lens according to claim 3, wherein the fourth lens unit includes, in order from the object side, a lens component of positive refractive power, and said lens component of negative refractive power that displaces an image by moving said lens component of negative refractive power so as to have the component of the direction perpendicular to the optical axis.

7. A zoom lens according to claim 3, wherein a condition $-0.8 < \beta_{rt} < -0.1$ is satisfied where β_{rt} is a lateral magnification at a telephoto end of an optical member disposed closer to an image plane than said lens component of negative refractive power that is moved so as to have the component of the direction perpendicular to the axial.

8. A zoom lens according to claim 4, wherein the lens component of positive refractive power comprises a cemented lens of a positive lens and a negative lens or a single positive lens, and the lens component of negative refractive power comprises a cemented lens of a positive lens and a negative lens.

9. An optical apparatus comprising a zoom lens, said zoom lens comprising, in order from an object side, a first lens unit of positive refractive power, a second lens unit of negative refractive power, a third lens unit of positive refractive power, a fourth lens unit of negative refractive power, and a fifth lens unit of positive

refractive power, wherein said zoom lens moves a predetermined lens unit during zooming from a wide-angle end to a telephoto end so that a separation between said first and second lens units increases, a separation between said second and third lens units decreases, a separation between said third and fourth lens units increases, and a separation between said fourth and fifth lens units decreases, and wherein an image is displaced by moving at least part of the fourth lens unit so as to have a component of a direction perpendicular to an optical axis.

10. An optical apparatus according to claim 9, further comprising a photoelectric conversion element at an image plane.

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